

REMARKS

Claims 1-18, 20-41, 52-53, 54-62 and 64-76 are presently pending. Claims 1, 4, 6-7, 12, 26, 34-36, 39, and 43-44 have been amended. Claims 3, 10-11, 14, 20-25, 27-33, 37-38, 40-42, and 45-76 have been cancelled. Thus, claims 1-2, 4-9, 12-13, 15-18, 26, 34-36, 39, and 43-44 remain pending in the present application.

I. Claim Rejections - 35 U.S.C. § 102 and § 103(a)

The references applied by the Examiner do not disclose, describe, or suggest the claimed multi-layer barrier either alone or in combination. The present claims are based on the discovery of a multi-layer barrier that substantially prevents pesticide release from the barrier (i.e., at a rate of less than 0.4 $\mu\text{g}/\text{cm}^2/\text{day}$) but that nevertheless prevents wood pests from breaching the barrier. The claimed multi-layer barrier is effective in preventing wood pests from breaching the barrier with minimal impact on the environment. The multi-layer barrier comprises at least one pesticide-releasing layer and at least one pesticide-retaining layer. The pesticide-releasing layer contains at least one pesticide bound within a polymeric matrix. The pesticide-retaining layer releases only minute amounts of the pesticide such that substantially no pesticide is released from the barrier (i.e., at a rate of less than 0.4 $\mu\text{g}/\text{cm}^2/\text{day}$). By allowing the pesticide to release at this extremely low rate, the claimed multi-layer barrier remains effective in preventing wood pests from breaching the barrier for a prolonged period of time measured in years.

Applicants respectfully submit that present claims 1-2, 4-7, and 15-16 are patentable over Martinet (AU 13886/95). Nowhere does Martinet disclose a pesticide-releasing layer having a polymeric matrix containing at least one pesticide bound within a polymeric matrix. While Martinet discloses sheets of film of plastic which are impregnated with an insecticide (Martinet, p. 6, ll. 15-19), there is no disclosure in Martinet of a polymeric matrix let alone a polymeric matrix containing at least one pesticide bound within the matrix. Impregnating a film of plastic material with an insecticide is not the same as nor does it achieve the same effect as binding an insecticide within a polymeric matrix. Moreover, nowhere does Martinet suggest a combination of pesticide-releasing and pesticide-retaining layers such that substantially no pesticide is released from the barrier (i.e., at a rate of less than 0.4 $\mu\text{g}/\text{cm}^2/\text{day}$). Rather, Martinet discloses a “gradual release” of small doses of pesticide – the release being sufficient to create a “contact and ‘shock’ effect.” Id. at p. 7, ll. 31-36. Martinet also fails to

disclose a multi-layer barrier let alone one comprising at least one pesticide-retaining layer and at least one pesticide-releasing layer. Withdrawal of the rejection based on Martinet is respectfully requested.

Applicants also submit that present claims 1-2, 4-9, 12-13, 15-18, 26, 34-36, 39, and 43-44 are patentable over Von Kohorn (U.S. Patent No. 4,639,393) in view of Zimmerman (U.S. Patent No. 5,139,566). Von Kohorn is directed to a dispenser including a layer (element 13) formed from a polymeric composition which contains active pest control agent(s) and attractant(s). Von Kohorn, col. 5, ll. 42 – col. 6, l. 10. Layer 13 is bonded to wall elements 11 and 15. Id. The active pest control agent(s) can migrate from layer 13 into wall elements 11 or 15 and onto the surfaces of the dispenser (elements 12 and 17). Id. Wall element 15 may also act to control migration of the active pest control agent(s) onto the wall surface. In contrast, Zimmerman discloses a single layered web or sheet having nodules or deposits that comprise a soil treatment agent(s). Zimmerman, col. 2, l. 67 – col. 3, l. 31. The soil treatment agent(s) may be “dispersed in a water insoluble solid binder or matrix” in a manner that the “active agent will be continuously released.” Id.

Applicants submit that the Von Kohorn-Zimmerman combination has been made based on improper hindsight. An obviousness determination is improper when it is “based on the hindsight combination of components selectively culled from the prior art to fit the parameters of the patented invention.” ATD Corp. v. Lydall, Inc., 48 U.S.P.Q.2d 1321, 1329 (Fed. Cir. 1998). It is impermissible to “use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.” In re Fritch, 23 U.S.P.Q.2d 1780, 1784 (Fed. Cir. 1992), quoting In re Fine, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Here, Applicants respectfully submit that the Von Kohorn-Zimmerman combination is being impermissibly made only in light of the knowledge of Applicants’ disclosure. Applicants submit that, but for the knowledge of Applicants’ claimed multi-layer barrier, the Von Kohorn-Zimmerman combination would not have occurred to the Examiner. One would not be motivated to modify the Von Kohorn layered structure – which uses a layered structure to control (if desired) the release of pesticide – to incorporate the geotextile of Zimmerman – which controls pesticide release via an entirely different mechanism, namely, a single layer structure in combination with a binder or matrix. One would not be motivated to look to another reference (i.e., Zimmerman) to achieve a result which can presumably be achieved (i.e., the control of pesticide release) via Von Kohorn alone.

In addition, it would not have been obvious to modify the Von Kohorn layered structure to incorporate the Zimmerman geotextile because the change proposed by the Examiner would affect the

principle of operation of the Von Kohorn reference. The Examiner's proposed modification – modifying Von Kohorn's layered structure to incorporate Zimmerman's single layered structure which controls pesticide release using nodules/deposits with soil treatment agent dispersed in binder/matrix – would change the basic principle under which the Von Kohorn structure was designed to operate, i.e., using a layered structure containing a wall element to control pesticide release. M.P.E.P. § 2143.01. Such a modification is impermissible. Id.

Moreover, even if Von Kohorn and Zimmerman could be properly combined, the combination fails to achieve the claimed invention. Neither Von Kohorn nor Zimmerman discloses a pesticide-releasing layer having a polymeric matrix containing at least one pesticide bound within a polymeric matrix. Likewise, Von Kohorn and Zimmerman do not disclose the claimed pesticide-retaining layer – a layer which releases only minute amounts of pesticide such that substantially no pesticide is released from the barrier, the rate being less than $0.4 \mu\text{g}/\text{cm}^2/\text{day}$.

For the foregoing reasons, withdrawal of the rejections based on Von Kohorn in view of Zimmerman is respectfully requested.

Applicants also submit that present claims 1-2, 4-9, 12-13, 15-18, 26, 34-36, 39, and 43-44 are patentable over Von Kohorn in view of Iwakawa (U.S. Patent No. 5,902,597), Saitoh (U.S. Patent No. 4,747,902) and Kodama (WO 95/22902).

Iwakawa discloses an “under floor insect control method . . . in which an insect control chemical in a mixed resin foam coating can be installed by forcefully mixing . . . and spraying . . . an aqueous emulsion, . . . an inert organic solvent solution . . . and an insect control chemical.” Iwakawa, col. 2, ll. 34-49.

Saitoh discloses

a method for producing laminated material which is characterized in that the lamination process can be carried out quite easily, the adhesive strength between laminated layers is high and, in the lamination process, the thermal deterioration of polyolefin or its composition or the undesirable release or deterioration of active agents in the polyolefin composition are well avoided.

Saitoh, col. 1, ll. 9-16. The Saitoh method includes a “substrate sheet” “which is previously applied with the lamination of polyolefin.” Id. at col. 2, ll. 52-54. In one method, “a polyolefin film or active agent-containing polyolefin film to be laminated is used by being heated to a molten web.” Id. at col. 2, ll. 54-57. In the other method disclosed in Saitoh, “the step of preparation of the film to be laminated and the step of lamination are combined into one step.” Id. at col. 2, ll. 57-60.

Kodama discloses a method of controlling pests using termite control compositions containing a pyrazole derivative and a pyrethroid compound as effective ingredients. Kodama, p. 1, ll. 3-5; p. 4, ll. 8-12.

These references either alone or in combination fail to render the claimed invention obvious. Von Kohorn, Iwakawa, Saitoh, and/or Kodama fail to disclose a pesticide-releasing layer having a polymeric matrix containing at least one pesticide bound within a polymeric matrix. Likewise, Von Kohorn, Iwakawa, Saitoh, and/or Kodama fail to disclose the claimed pesticide-retaining layer – a layer which releases only minute amounts of pesticide such that substantially no pesticide is released from the barrier, the rate being less than 0.4 $\mu\text{g}/\text{cm}^2/\text{day}$.

Applicants further submit that the Von Kohorn-Iwakawa-Saitoh-Kodama combination has been made based on improper hindsight. As discussed above, an obviousness determination is improper when it is “based on the hindsight combination of components selectively culled from the prior art to fit the parameters of the patented invention.” ATD Corp., 48 U.S.P.Q.2d at 1329. It is impermissible to “use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.” Fritch, 23 U.S.P.Q.2d at 1784. Here, Applicants respectfully submit that the Von Kohorn-Iwakawa-Saitoh-Kodama combination is being impermissibly made only in light of the knowledge of Applicants’ disclosure. Applicants submit that, but for the knowledge of Applicants’ multi-layer barrier, the Von Kohorn-Iwakawa-Saitoh-Kodama combination would not have occurred to the Examiner.

For the foregoing reasons, withdrawal of the rejection based on Von Kohorn in view of Zimmerman or Iwakawa, Saitoh, and Kodama is respectfully requested.

Assuming arguendo that Crook (U.S. Patent No. 6,224,957) has been properly applied as a reference under 35 U.S.C. § 102(e), Applicants respectfully submit that present claims 1, 4-5, 7, 9, 12-13, 16, and 18 are patentable over Crook. Crook discloses a protective material for preventing microbiologically-influenced corrosion in buried conduits. Crook, cols. 1-2. The Crook protective material solves corrosion problems associated with “buried conduits comprised of concrete, concrete with metal reinforcements, or metal.” *Id.* at col. 1, ll. 11-17. The goal of the Crook apparatus is to protect against corrosion such as with metal objects. Nowhere does Crook disclose a multi-layer barrier against wood pests or preventing wood pests from breaching such a barrier. Accordingly, withdrawal of the rejection based on Crook is respectfully requested.

Assuming arguendo that Gale (WO/0037058) has been properly applied as a reference under 35 U.S.C. § 102(b)/102(e), Applicants respectfully submit that present claims 1-2, 4-9, and 12 are patentable over Gale. Gale discloses "transdermal delivery devices for administering nicotine for use in smoking cessation treatments." Gale, p. 1, ll. 11-12. The Gale apparatus is a transdermal (i.e., through or by way of the skin) drug delivery apparatus to promote cessation of smoking in humans. Nowhere does Gale disclose a multi-layer barrier against wood pests or preventing wood pests from breaching such a barrier. Accordingly, withdrawal of the rejection based on Gale is respectfully requested.

II. Claim Rejections - 35 U.S.C. § 112

In view of the cancellation of claims 54-56, withdrawal of the rejection of the claims under 35 U.S.C. § 112, second paragraph is respectfully requested.

III. Enclosures

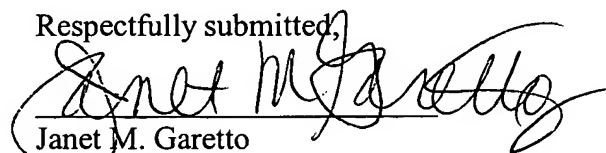
Submitted herewith is a supplemental information disclosure statement. Applicants request that this information disclosure statement be entered and the reference(s) listed on the attached Form PTO-1449 be considered by the Examiner and made of record.

IV. Conclusion

If there are any matters which may be resolved or clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at the number indicated. Should any additional fees be required (except for payment of the issue fee), the Commissioner is authorized to deduct the fees from Jenkins & Gilchrist, P.C. Deposit Account No. 10-0447, Order No. 47309-00031USP1.

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Respectfully submitted,



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